

HUTSON INDUSTRIES

SCR



ISOTAB* SCR ELECTRICALLY ISOLATED

TO-220
8 AMPERE
10 AMPERE
20 AMPERE

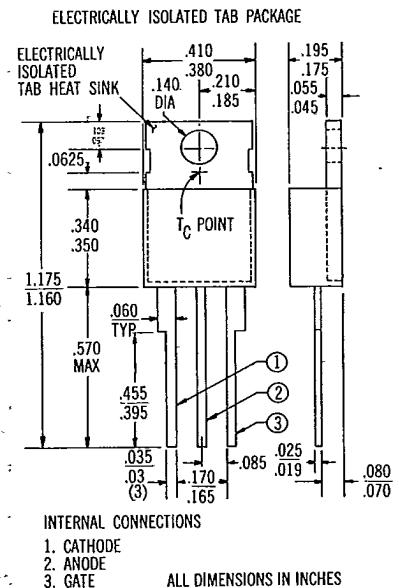


Hutson ISOTAB*-packaged SCRs featuring an improved electrical isolation technique, will withstand a minimum of 1600 VAC from leads to tab for one minute at 80°C case temperature. Some feature Beryllium Oxide isolation for further improved thermal characteristics. Hermetically sealed within this package is a dense, void-free-glass passivated, hermetically-sealed chip. ISOTAB SCRs have a low thermal impedance and are available in voltage ratings from 50 to 600 volts.

These economical, highly reliable SCRs are the result of Hutson's advanced engineering and manufacturing technology, and experience in switching-device applications.

Hutson SCRs are reverse-blocking triode thyristors and may be switched from off-state to conduction by a current pulse applied to the gate terminal. They are designed for control applications in lighting, heating, cooling and static switching relays.

In addition to these plastic packaged SCRs, Hutson offers other package configurations in current ratings to 35 Amperes and voltage ratings to 600V. All Hutson SCRs are available in chip form. For additional information, please consult Hutson Industries.



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ISOT 00008-1X

MAXIMUM RATINGS		SYMBOL	V_{DRM} and V_{RRM}	DEVICE NOS. (1)			UNITS
	Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage (Gate Open) at $T_C=100^\circ\text{C}$	V_{DRM} and V_{RRM}	50 100 200 300 400 500 600	IS08 IS18 IS28 IS38 IS48 IS58 IS68	IS010 IS110 IS210 IS310 IS410 IS510 IS610	IS020 IS120 IS220 IS320 IS420 IS520 IS620	VOLT
	RMS On-State Current at $T_C=75^\circ\text{C}$ and Conduction Angle of 180	$I_{T(RMS)}$		8	10	20	AMP
	Peak Surge (Non Repetitive) On State Current. One Cycle at 50 or 60 Hz	I_{TSM}		80	100	200	AMP
	Peak Gate-Trigger Current for $3\mu\text{sec. Max.}$	I_{GTM}		1	1	1	AMP
	Peak Gate-Power Dissipation at $I_{GT} \leq I_{GTM}$ for $3\mu\text{sec. Max.}$	P_{GM}		16	16	16	WATT
	Average Gate Power Dissipation	$P_{G(AV)}$		0.5	0.5	0.5	WATT
	Storage Temperature Range	T_{stg}		-40 to +150			$^\circ\text{C}$
	Operating Temperature Range	T_{oper}		-40 to +100			$^\circ\text{C}$
ELECTRICAL CHARACTERISTICS At Maximum Ratings and Specified Case Temp.	Peak-Off State Current at $T_C=100^\circ\text{C}$, Gate Open and V_{DRM} and $V_{RRM}=\text{Max. Rating}$	I_{DRM} and I_{RRM}		2.2 MAX	2.2 MAX	2.2 MAX	mA
	Maximum On-State Voltage at $T_C=25^\circ\text{C}$	V_{TM}		2.0 MAX	1.8 MAX	1.5 MAX	VOLT
	Peak On-State Current			12	14	30	AMPS
	DC Holding Current at $T_C=25^\circ\text{C}$	I_{HO}		30 MAX	30 MAX	30 MAX	mA
	DC GATE-Trigger Current for Anode Voltage=12 VDC; $R_L=30\Omega$ and at $T_C=25^\circ\text{C}$	I_{GT}		25 MAX	25 MAX	25 MAX	mA
	DC Gate-Trigger Voltage for Anode Voltage=12 VDC; $R_L=30\Omega$ and at $T_C=25^\circ\text{C}$	V_{GT}		1.5 MAX	1.5 MAX	1.5 MAX	VOLT
	Gate Controlled Turn-On Time ($t_d + t_r$) $I_G=80\text{mA}$ $T_C=25^\circ\text{C}$	t_{gt}		2.5 MAX	2.5 MAX	2.5 MAX	μsec
	Rate of Change of On-State Current for Anode Voltage= V_{DRM} , $I_{GT}=50\text{mA}$	di/dt		80 TYP	80 TYP	80 TYP	A/ μsec
	Critical Rate-of-Rise of Off-State Voltage (Gate Open) and $T_C=100^\circ\text{C}$	critical dv/dt		200 TYP	200 TYP	200 TYP	V/ μsec
	Thermal Resistance, Junction to Case	$R_{\theta JC}$		2.5 TYP	2.5 TYP	1.5* TYP	$^\circ\text{C/WATT}$

*B₂O Substrate

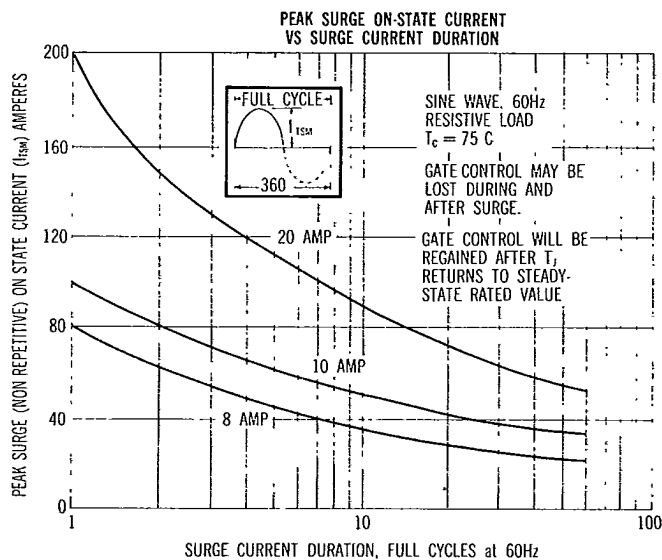
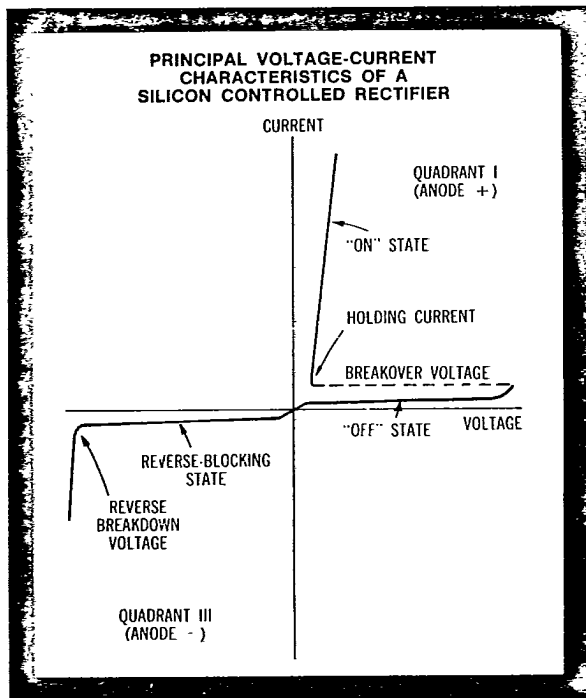
ISOTS 00008-2X

DEVICE NO. DESIGNATION

NOTE 1: I = ELECTRICALLY ISOLATED _____
 S = SCR _____
 0 to 6 = 50 to 600 V (V_{DROM}) RATING _____
 8, 10, 20 = 8A, 10A & 20A I_{TIRMSI} _____
 NOTE 2: I_{GT} CHARACTERISTICS _____
 NO SUFFIX = 25 mA
 X = 40 mA

EXAMPLE
 I S 4 8 X

Example Device No.
 would be:
 an Electrically
 isolated SCR,
 400 V (V_{DROM}),
 8A I_{TIRMSI} with
 40 mA (I_{GT})



IS δ TS 00008-3X

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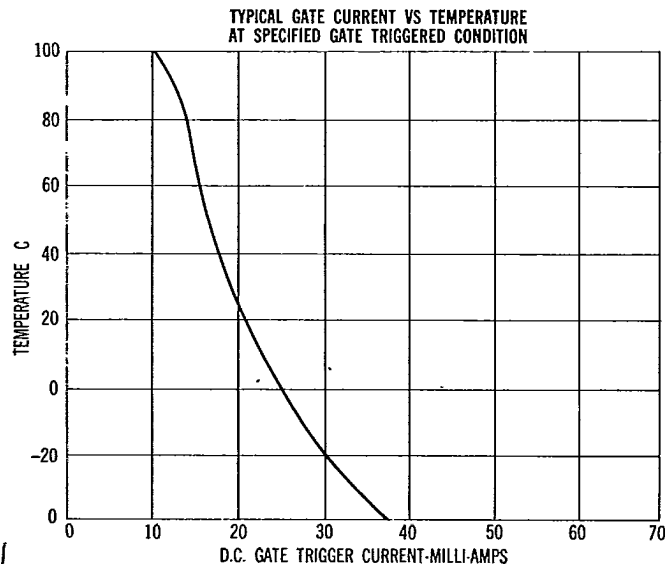
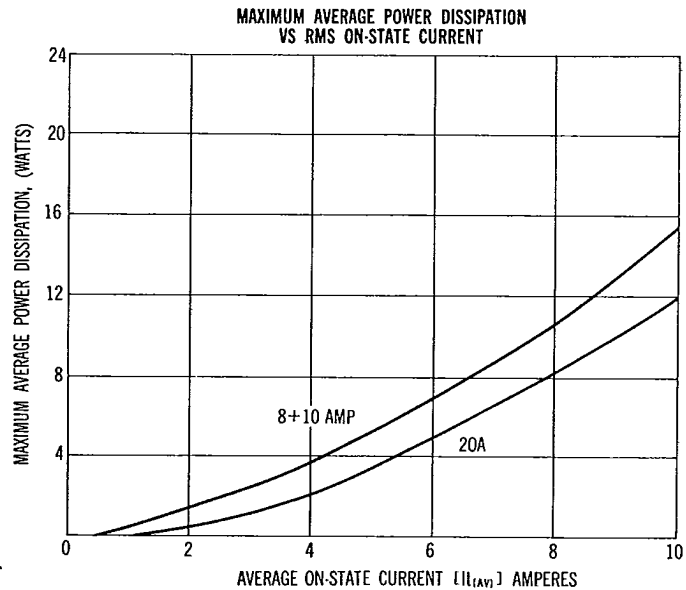
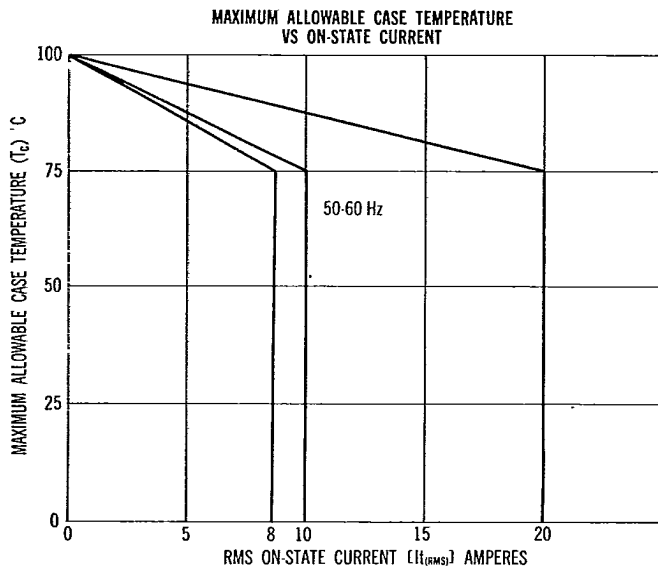
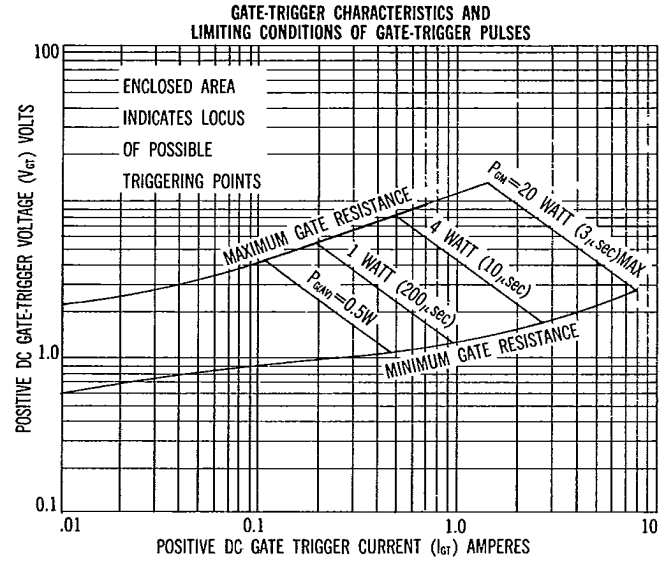
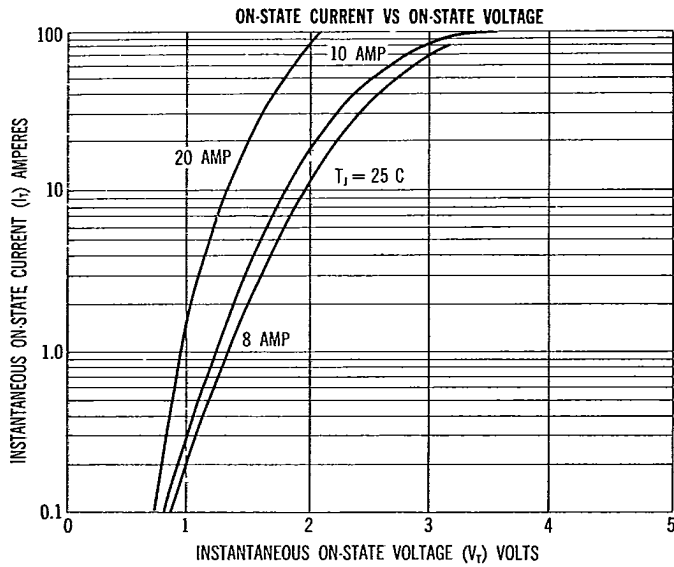
8,10, 20 AMPERE ISOTAB* (ELECTRICALLY ISOLATED) SCR

4644700 HUTSON INDUSTRIES

69 DE 4644700 0000242 3

69A 00242

D 7-25-15



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Hutson Industries reserves the right to make changes in specifications at any time and without notice to improve design and/or performance of their products.

ISPT 00008-4X